

IN THE CLAIMS:

Please amend claims 1-5, 7-9, 11-20, 22-25, 27-34 as follows. Please cancel claim 10 without prejudice or disclaimer.

1. (Currently Amended) A system, comprising:

a network interface configured to communicate with nodes in a cluster;

a memory configured to store information relating to cluster management;

a configuration subsystem operationally coupled to a remote management broker,

wherein the remote management broker is configured to distribute information between the nodes in the cluster; and

a processor configured to,

access the cluster from a single-point,

obtain information relating to at least two devices within the cluster,

present the information to a user,

determine network management operations to perform to the cluster,

apply a configuration lock that is intended to prevent other applications

from performing network management operations on the at least two devices
within the cluster.

perform the determined network management operations, and

determine whether the network management operations on the cluster,

including said at least two devices, were applied correctly, and when the network

management operations were not applied correctly, roll back to a successful configuration.

2. (Currently Amended) The system of ~~Claim-claim~~ 1, wherein the processor is configured to provide a command line interface that is configured to access the cluster.

3. (Currently Amended) The system of ~~Claim-claim~~ 1, wherein the processor is configured to provide a graphical user interface that is configured to access the cluster.

4. (Currently Amended) The system of ~~Claim-claim~~ 1, further comprising:
an aggregator configured to aggregate data relating to the devices within the cluster.

5. (Currently Amended) The system of ~~Claim-claim~~ 1, wherein the remote management broker further comprises:
a secure transport configured to transport messages;
a remote management broker server operationally coupled to the secure transport;
and
a remote management broker client operationally coupled to the secure transport.

6. (Previously Presented) The system of claim 1, wherein the remote management broker is further configured to collect attributes from the configuration subsystem.

7. (Currently Amended) The system of ~~Claim~~claim 5, wherein the messages include a header that is configured to authenticate the messages.

8. (Currently Amended) The system of ~~Claim~~claim 7, wherein the header includes a message authentication code that acts as a shared secret within the cluster and a magic field that identifies one or more of the messages as a remote management broker message.

9. (Currently Amended) A method, comprising:
accessing a cluster from a single-point;
obtaining attributes relating to at least two devices within the cluster;
receiving input from a user relating to the attributes;
determining network management operations to perform on the cluster based on the received input;

applying a configuration lock that is intended to prevent other applications from performing network management operations on the at least two devices within the cluster;

performing the determined network management operations on the cluster; and determining whether the network management operations on the cluster, including said at least two devices, were applied correctly, and when the network management operations were not applied correctly, rolling back to a successful configuration.

10. (Cancelled)

11. (Currently Amended) The method of ~~Claim-claim~~ 9, wherein the providing cluster management from the single-point comprises providing cluster management from a selected one of a command line interface or a graphical user interface.

12. (Currently Amended) The method of ~~Claim-claim~~ 11, further comprising: distributing information between the nodes in the cluster using a remote management broker.

13. (Currently Amended) The method of ~~Claim-claim~~ 12, wherein the performing the determined network management operations on the cluster further comprises distributing the network management operations to each of the devices.

14. (Currently Amended) The method of ~~Claim-claim~~ 12, further comprising:

determining whether the network management operations on the cluster were performed correctly, and when the network management operations were not performed correctly, rolling back to a successful configuration.

15. (Currently Amended) The method of ~~Claim-claim~~ 12, further comprising:
utilizing a header that is configured to authenticate messages.

16. (Currently Amended) The method of ~~Claim-claim~~ 9, further comprising:
applying a configuration lock that is intended to prevent other applications from performing network management operations on the devices within the cluster during a predetermined time; and
releasing the configuration lock after the network management operations are performed.

17. (Currently Amended) The method of ~~Claim-claim~~ 9, further comprising:
aggregating data relating to the devices within the cluster on a single device within the cluster.

18. (Currently Amended) A computer program embodied on a computer readable storage medium, said computer program configured to control a processor to perform a method, the method comprising:

obtaining attributes relating to at least two devices within a cluster from a single-point;

receiving input relating to the attributes;

determining network management operations to perform on the cluster based on the received input;

distributing the network management operations to the at least two devices within the cluster;

applying a configuration lock that is intended to prevent other applications from performing network management operations on the at least two devices within the cluster:

applying the network management operations; and

determining whether the network management operations on the cluster, including said at least two devices, were applied correctly, and when the network management operations were not applied correctly, rolling back to a successful configuration.

19. (Currently Amended) The computer readable storage medium of Claim-claim 18, further comprising instructions to control a processor to perform the method further comprising:

applying a configuration lock that is intended to prevent other applications from performing network management operations on the devices within the cluster during a predetermined time.

20. (Currently Amended) The computer readable storage medium of Claim-claim 18, wherein receiving the input further comprises at least one of utilizing a command line interface or utilizing a graphical user interface.

21. (Canceled)

22. (Currently Amended) The computer readable storage medium of Claim-claim 18, ~~further comprising instructions to control a processor to perform the method further comprising:~~ providing a header that is configured to help in authenticating messages.

23. (Currently Amended) The computer readable storage medium of Claim-claim 18, ~~further comprising instructions to control a processor to perform the method further comprising:~~ aggregating data relating to the devices within the cluster on a single device within the cluster.

24. (Currently Amended) An apparatus, comprising:
obtaining means for obtaining attributes relating to at least two devices within a cluster from a single-point;

receiving means for receiving input relating to the attributes;

determining means for determining network management operations to perform on the cluster based on the received input;

distributing means for distributing the network management operations to the devices within the cluster;

applying means for applying a configuration lock that is intended to prevent other applications from performing network management operations on the at least two devices within the cluster;

applying means for applying the network management operations to the devices within the cluster; and

determining means for determining whether the network management operations on the cluster, including said at least two devices, were applied correctly, and when the network management operations on the cluster were not applied correctly, rolling back to a successful configuration.

25. (Currently Amended) The apparatus of Claim claim 24, further comprising:

applying means for applying a configuration lock that is intended to prevent other applications from performing network management operations on the devices within the cluster during a predetermined time.

26. (Cancelled)

27. (Currently Amended) The system of ~~Claim~~claim 8, wherein the message authentication code is calculated from contents of the message and from a shared secret value that is known to the devices within the cluster.

28. (Currently Amended) The method of ~~Claim~~claim 15, wherein the header comprises a message authentication code that is calculated from contents of the message and from a shared secret value that is known to the devices within the cluster.

29. (Currently Amended) The computer readable medium of ~~Claim~~claim 22, wherein the header comprises a message authentication code that is calculated from contents of the message and from a shared secret value that is known to the devices within the cluster.

30. (Currently Amended) A system, comprising:
network interface communicating means for communicating with nodes in a cluster;
storing means for storing information relating to cluster management;
distributing means for distributing information between the nodes in the cluster;
accessing means for accessing the cluster from a single-point;
obtaining means for obtaining information relating to at least two devices within the cluster;

presenting means for presenting the information to a user;

operation determining means for determining network management operations to perform to the cluster;

applying means for applying a configuration lock that is intended to prevent other applications from performing network management operations on the at least two devices within the cluster;

performing means for performing the determined network management operations; and

correction determining means for determining whether the network management operations on the cluster, including said at least two devices, were applied correctly, and when the network management operations were not applied correctly, rolling back to a successful configuration.

31. (Currently Amended) An apparatus, comprising:

a network interface configured to communicate with nodes in a cluster;

a memory configured to store information relating to cluster management; and

a processor configured to,

access the cluster from a single-point,

obtain information relating to at least two devices within the cluster,

present the information to a user,

determine network management operations to perform to the cluster,

apply a configuration lock that is intended to prevent other applications from performing network management operations on the at least two devices within the cluster,

perform the determined network management operations, and determine whether the network management operations on the cluster, including said at least two devices, were applied correctly, and when the network management operations were not applied correctly, roll back to a successful configuration.

32. (Currently Amended) The apparatus of Claim-claim 31, wherein the processor is configured to provide a command line interface that is configured to access the cluster.

33. (Currently Amended) The apparatus of Claim-claim 31, wherein the processor is configured to provide a graphical user interface that is configured to access the cluster.

34. (Currently Amended) The apparatus of Claim-claim 31, further comprising: an aggregator configured to aggregate data relating to the devices within the cluster.